

fall for Hillebrand Glen would be $11.97 \times 1.03 = 12.33$ inches.

Actual run-off determination made by the water commission from June 1, 1916 to January 31, 1917, are as follows:

Monthly run-off in million gallons, June, 1916, to January, 1917.

1916.	
June.....	5.12
July.....	6.83
August.....	14.46
September.....	7.56
October.....	14.60
November.....	22.66
December.....	37.56
1917.	
January.....	19.92

Total, 245 days.....128.68

The average daily run-off = 0.53 million gallons, or 530,000 gallons per day.

The total rainfall recorded by raingage No. 2, in Hillebrand Glen, June, 1916, to January, 1917, was 113.92 inches, or 0.46 inch per day. This quantity corresponds

to a storage of $5,280 \times 5,280 \times 0.3 \times 7.48 \times \frac{0.46}{12} = 2,400,000$ gallons per day.

The per cent of actual run-off to actual rainfall for this 8-month period was $\frac{530,000}{2,400,000} = 22$ per cent.

This result agrees reasonably with the average ratio derived from a consideration of the rainfall-run-off relation curves (see fig. 5).

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Twenty-two per cent of 12.33 inches or 2.71 inches would be the average run-off per month, or 2.71 feet per year from Hillebrand Glen. This would amount to 170,000,000 gallons per year storage, or 465,000 gallons per day (0.46 million gallons per day).

MEAN LAKE LEVELS DURING APRIL, 1917.

By UNITED STATES LAKE SURVEY.

[Dated: Detroit, Mich., May 7, 1917.]

The following data are reported in the Notice to Mariners of the above date:

Data.	Lakes.			
	Superior.	Michigan and Huron.	Erie.*	Ontario.
Mean level during April, 1917:				
Above mean sealevel at New York	<i>Feet.</i> 602.28	<i>Feet.</i> 580.78	<i>Feet.</i> 572.57	<i>Feet.</i> 246.24
Above or below—				
Mean stage of March, 1917.....	−0.05	+0.32	+1.04	+1.07
Mean stage of April, 1916.....	−0.06	+0.88	+0.12	−0.16
Average stage for April, last 10 years.....	+0.72	+0.63	+0.16	−0.14
Highest recorded April stage.....	−0.41	−2.45	−1.61	−2.19
Lowest recorded April stage.....	+1.74	+1.56	+1.31	+1.40
Average relation of the April level to—				
March level.....	±0.0	+0.2	+0.6	+0.5
May level.....	−0.3	−0.3	−0.4	−0.5

* April, 1916, level of Lake St. Clair was 575.21 feet.